

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the instant application:

Listing of Claims:

1. (Currently Amended) A method for restricting resources consumed by ghost agents within a grid computing environment, comprising the steps of:

identifying a host, wherein said host is a software object operating in a grid of said grid environment;

associating a ghost agent within said grid with [[a]] said host, wherein said ghost agent is configured to execute at least one operation in said grid, wherein said operation comprises replicating and recording at least one action of said host within said grid;

ascertaining calculating a combined resource utilization value for said ghost agent and said host in a current computing resource of said grid, said combined resource utilization value specifying a sum of a total amount of resources required for said host operations and said ghost agent operations in said computing resource;

comparing said resource utilization value to a usage threshold value for the current computing resource, wherein the usage threshold value defines a maximum resource utilization value permitted by the current computing resource for executing operations of the host; [[and]]

determining whether at least one to allow operation of said ghost agent [[is]] to [[be]] execute[[d]] one or more of said operations in the current computing resource responsive to said comparing step such that a combined resource utilization value for the host and the allowed operations does not exceed the usage threshold value; and

moving said host from said grid to another grid within said grid environment; and, in response to said moving of said host, moving said ghost agent from said grid to

said another grid.

2. (Currently Amended) The method of claim 1, wherein said ascertaining calculating step further comprises the steps of:

determining a first value specifying a usage of a first resource type;
determining a second value specifying a usage of a second resource type; and
calculating said resource utilization based on said first value and said second value.

3 (Currently Amended) The method of claim 1, ~~further comprising~~ wherein said determining step further comprises the steps of:

responsive to determining that no operations of said ghost agent are to be allowed,
~~deactivating said ghost agent according to said comparing step;~~
starting an idle timer; and,
activating said ghost agent when said idle timer reaches a predetermined time.

4. (Currently Amended) The method of claim 1, ~~further comprising~~ wherein said determining step further comprises the steps of:

identifying a first operation that requires a first quantity of computing resources;
and

identifying a second operation that requires a second quantity of computing resources, wherein said second operation can be performed by said ghost agent in place of said first operation[[,]] ; and

~~wherein said determining step selects~~ selecting between said first operation and said second operation based upon said comparing step.

5. (Original) The method of claim 3, further comprising the step of:
storing at least one operation in an operation queue when said ghost agent is deactivated.
6. (Original) The method of claim 5, further comprising the step of:
executing said stored operation when said ghost agent is activated.
7. (Original) The method of claim 5, wherein said operation queue is disposed within said ghost agent.
8. (Currently Amended) A computer-readable storage having stored thereon, a computer program having a plurality of code sections, said code sections executable by a computer for causing the computer to perform the steps of: ~~ghost agent comprising~~
providing an interface for associating [[said]] a ghost agent with a host, wherein said host is a software object operating in a grid of a grid environment, and wherein said ghost agent is configured to execute at least one operation in said grid, wherein said operation comprises replicating and recording at least one action of said host within said grid;
generating a ghost log ~~configured to~~ for recording data relating to said host operating in a computing resource of said grid; and
managing a ghost controller configured to compare a combined resource utilization levels value of said host and said ghost agent in the current computing resource with an established threshold[[s]] usage value for the current computing resource, to determine whether to allow said ghost agent to execute one or more of said operations in the current computing resource responsive, and wherein said ghost agent to automatically move[[s]] said ghost agent within [[a]] said grid environment,

wherein said combined resource utilization value specifies a sum of a total amount of resources required by said host operations and said ghost agent operations in said computing resource, wherein the usage threshold value defines a maximum resource utilization value permitted by the current computing resource for executing operations of the host, and wherein a combined resource utilization value for the host and the allowed operations does not exceed the usage threshold value,

wherein in response to said host moving from said grid to another grid within said grid environment, said ghost agent is moved from said grid to said another grid to follow the movements of said host.

9. (Currently Amended) The ~~ghost-agent~~ computer-readable storage of claim 8, wherein said ghost controller is further configured prevent said ghost agent from executing at least one operation based upon said comparison.

10. (Currently Amended) The ~~ghost-agent~~ computer-readable storage of claim 8, further comprising code sections for:

managing an operation queue configured to queue operations for execution by said ghost agent.

11. (Currently Amended) The ~~ghost-agent~~ computer-readable storage of claim 8, further comprising code sections for:

managing a ghost identifier configured to identify said ghost agent to components within said grid environment.

12. (Currently Amended) The ~~ghost-agent~~ computer-readable storage of claim 8, further comprising code sections for:

~~means for~~ disassociating said ghost agent from said host; and

~~means for~~ associating said ghost agent with a different host.

13. (Currently Amended) A ~~machine-readable~~ computer-readable storage having stored thereon, a computer program having a plurality of code sections, said code sections executable by a ~~machine~~ computer for causing the ~~machine~~ computer to perform the steps of:

identifying a host, wherein said host is a software object operating in a grid of a grid environment;

associating a ghost agent within said grid with [[a]] said host, wherein said ghost agent is configured to execute at least one operation in said grid, wherein said operation comprises replicating and recording at least one action of said host within said grid;

ascertaining calculating a combined resource utilization value for said ghost agent and said host in a current computing resource of said grid, said combined resource utilization value specifying a sum of a total amount of resources required for said host operations and said ghost agent operations in said computing resource;

comparing said resource utilization value to a usage threshold value for the current computing resource, wherein the usage threshold value defines a maximum resource utilization value permitted by the current computing resource for executing operations of the host; [[and]]

determining whether at least one to allow operation of said ghost agent [[is]] to [[be]] execute[[d]] one or more of said operations in the current computing resource responsive to said comparing step such that a combined resource utilization value for the host and the allowed operations does not exceed the usage threshold value; and

moving said host from said grid to another grid within said grid environment; and, in response to said moving of said host, moving said ghost agent from said grid to

said another grid.

14. (Currently Amended) The ~~machine-readable~~ computer-readable storage of claim 13, wherein said ~~ascertaining~~ calculating step further comprises the steps of:

determining a first value specifying a usage of a first resource type;
determining a second value specifying a usage of a second resource type; and
calculating said resource utilization based on said first value and said second value.

15. (Currently Amended) The ~~machine-readable~~ computer-readable storage of claim 13, ~~further comprising~~ wherein said determining step further comprises the steps of:

responsive to determining that no operations of said ghost agent are to be allowed,
~~deactivating said ghost agent according to said comparing step;~~
starting an idle timer; [[and,]]
activating said ghost agent when said idle timer reaches a predetermined time.

16. (Currently Amended) The ~~machine-readable~~ computer-readable storage of claim 13, ~~further comprising~~ wherein said determining step further comprises the steps of:

identifying a first operation that requires a first quantity of computing resources;
and

identifying a second operation that requires a second quantity of computing resources, wherein said second operation can be performed by said ghost agent in place of said first operation[[],] ; and

~~wherein said determining step selects~~ selecting between said first operation and said second operation based upon said comparing step.

17. (Currently Amended) The ~~machine-readable~~ computer-readable storage of claim 15, further comprising the step of:

storing at least one operation in an operation queue when said ghost agent is deactivated.

18. (Currently Amended) The ~~machine-readable~~ computer-readable storage of claim 17, further comprising the step of:

executing said stored operation when said ghost agent is activated.

19. (Currently Amended) The ~~machine-readable~~ computer-readable storage of claim 17, wherein said operation queue is disposed within said ghost agent.

20. (Currently Amended) A system for restricting resources consumed by ghost agents within a grid computing environment, comprising the steps of:

means for identifying a host, wherein said host is a software object operating in a grid of said grid environment;

means for associating a ghost agent within said grid with [[a]] said host, wherein said ghost agent is configured to execute at least one operation in said grid, wherein said operation comprises replicating and recording at least one action of said host within said grid;

means for ascertaining calculating a combined resource utilization value for said ghost agent and said host in a current computing resource of said grid, said combined resource utilization value specifying a sum of a total amount of resources required for said host operations and said ghost agent operations in said computing resource;

means for comparing said resource utilization value to a usage threshold value for the current computing resource, wherein the usage threshold value defines a maximum

resource utilization value permitted by the current computing resource for executing operations of the host; [[and]]

means for determining whether ~~at least one to allow operation of~~ said ghost agent [[is]] to [[be]] execute[[d]] one or more of said operations in the current computing resource responsive to said comparing step such that a combined resource utilization value for the host and the allowed operations does not exceed the usage threshold value;
and

means for moving said host from said grid to another grid within said grid environment; and,

means for moving said ghost agent from said grid to said another grid in response to moving said host to said another grid.